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001/045

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Serial No. 10/081,256
Filing Date February 19, 2002
Inventor..... David K. Ovard et al.
Assignee..... Micron Technology, Inc.
Group Art Unit..... 2618
Examiner Lana N. Le
Attorney's Docket No. MI40-341
Title: Wireless Communication Systems, Interrogators and Methods of Communicating
Within a Wireless Communication System"

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First Named Inventor	David K. Ovard
Art Unit	2618
Examiner Name	Lana N. Le
Attorney Docket Number	MI40-341

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Serial No. 10/081,256
Filing Date February 19, 2002
Inventorship David K. Ovard et al.
Assignee..... Micron Technology, Inc.
Group Art Unit..... 2618
Examiner Lana Le
Customer No. 021567
Attorney's Docket No. MI40-341
Title: Wireless Communication Systems, Interrogators and Methods of Communicating
Within a Wireless Communication System

CORRECTED BRIEF OF APPELLANT

To: Mail Stop Appeal Brief-Patents
Commissioner of Patents
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Appellant appeals from the Office Action mailed August 11, 2006 (hereinafter "Office Action" or "Action"). The Commissioner is authorized to charge the fee required under 37 C.F.R. § 41.20(b)(2) to Deposit Account No. 23-0925.

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I. REAL PARTY IN INTEREST

The real party in interest of this application is Micron Technology, Inc. as evidenced by the full assignment of the pending application to Micron Communications, Inc. recorded starting at Reel 009823, Frame 0769, and the merger document recorded starting at Reel 010392, Frame 0229 in the Assignment Branch of the Patent and Trademark Office. Micron Technology, Inc., is a corporation established under the laws of the State of Delaware and having a principal place of business at 8000 South Federal Way, Boise, ID 83706, U.S.A.

II. RELATED APPEALS AND INTERFERENCES

Appellant, Appellant's undersigned legal representative, and the assignee of the pending application are aware of no appeals or interferences which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF THE CLAIMS

Claims 1-22, 24-41 and 44-57 are pending and stand rejected. Claims 23 and 42-43 are canceled. Appellant appeals the rejection of claims 1-22, 24-41 and 44-57.

IV. STATUS OF AMENDMENTS

No amendments have been filed since the mailing of the Office Action.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Concise explanations of the subject matter defined in each of the independent claims and argued dependent claims involved in the appeal follow with respect to exemplary illustrative embodiments of the specification and figures.

Referring to independent claim 1 and with reference to Fig. 1, a remote communication device 12 and interrogator 26 are described at page 5, line 20 of the specification according to one embodiment. A communication station 120 is described at page 7, line 20, communication circuitry is described at page 7, line 19 and a housing 14 is described at page 7, line 9 according to one embodiment.

Referring to dependent claim 4, adjustment circuitry according to one embodiment is discussed at page 32, line 5 of the specification.

Referring to dependent claim 7, communication circuitry including a coaxial RF cable is described at page 25, line 7 of the specification according to one embodiment.

Referring to dependent claim 8, communication circuitry including wireless transceivers is shown in Fig. 7 and described at page 21, line 25 according to one embodiment of the specification.

Referring to independent claim 10, an interrogator 26 is shown in Fig. 1 and described at page 5, line 20 of the specification according to one embodiment. Communication stations 120 are described at page 7, line 20, communication circuitry 106 is described at page 7, line 19 and a housing 14 is described at page 7, line 9 according to one embodiment.

Referring to dependent claim 13, adjustment circuitry according to one embodiment is discussed at page 32, line 5 of the specification.

Referring to dependent claim 16, communication circuitry including a coaxial RF cable is described at page 25, line 7 of the specification according to one embodiment.

Referring to dependent claim 17, communication circuitry including wireless transceivers is shown in Fig. 7 and described at page 21, line 25 according to one embodiment of the specification.

Referring to independent claim 18, an interrogator 26 is shown in Fig. 1 and described at page 5, line 20 of the specification according to one embodiment. Communication stations 120 are described at page 7, line 20 and a housing 14 is described at page 7, line 9 according to one embodiment.

Referring to independent claim 24 and with reference to Fig. 1, a remote communication device 12 and interrogator 26 are described at page 5, line 20 of the specification according to one embodiment. Communications using communication station 120 is described at page 7, line 20 in one embodiment. Communication of remote communication devices is described at page 8, line 13 of the specification in one embodiment. Receiving signals within the communication station 120 is described at page 8, line 14 of the specification. Generation of return link communication signals is described at page 8, line 21 according to one embodiment. Communicating signals using communication circuitry 106 and receiving the signals within housing 14 are described at page 7, line 19 and page 8, line 23 according to one embodiment.

Referring to dependent claim 27, adjusting providing a signal having a substantially constant level according to one embodiment is discussed at page 32, line 5 of the specification.

Referring to independent claim 31 and with reference to Fig. 1, an interrogator 26 is described at page 5, line 20 of the specification according to one embodiment. Communication stations 120 are described at page 7, line 20, communication circuitry 106 is described at page 7, line 19 and a housing 14 is described at page 7, line 9 according to one embodiment. Communications using communication stations 120 are described at page 7, line 20 according to one embodiment. Receiving signals within the communication station 120 is described at page 8, line 14 of the specification according to one embodiment. Generation of return link communication signals is described at page 8, line 21 according to one embodiment. Communicating signals using communication circuitry 106 and receiving the signals within housing 14 are described at page 7, line 19 and page 8, line 23 according to one embodiment.

Referring to dependent claim 34, adjusting providing a signal having a substantially constant level according to one embodiment is discussed at page 32, line 5 of the specification.

Referring to dependent claim 56, a communication station and housing 14 being in different geographical locations is described in one embodiment at page 9, line 8 of the specification.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

- A. The 102 rejection of claims 1-9, 38, 40, 44-45, and 50-57 over MacLellan.
- B. The 103 rejection of claims 8, 10-22, 31-39, 46, 47, 49 and 57 over the combination of Reis with MacLellan.

- C. The 103 rejection of claims 10-17 and 46 over the combination of MacLellan and Reis.
- D. The 103 rejection of claims 18-22 and 47 over the combination of MacLellan and Reis.
- E. The 102 rejection of claims 24-30, 39, 41 and 48 over MacLellan.
- F. The 103 rejection of claims 31-37 and 49 over the combination of MacLellan and Reis.
- G. The 102 rejection of claims 4 and 27 over MacLellan.
- H. The 103 rejection 13 and 34 over the combination of MacLellan and Reis.
- I. The 102 rejection of claim 7 over MacLellan.
- J. The 103 rejection of claim 16 over the combination of MacLellan and Reis.
- K. The 103 rejection of claims 8 and 17 over the combination of MacLellan and Reis.
- L. The 102 rejection of claim 51 over MacLellan.
- M. The 102 rejection of claim 53 over MacLellan.
- N. The 102 rejection of claims 54-55 over MacLellan.
- O. The 102 rejection of claim 55 over MacLellan.
- P. The 102 rejection of claim 56 over MacLellan.

VII. ARGUMENT

A. Positively-recited limitations of claims 1-9, 38, 40, 44-45, and 50-57 are not disclosed by MacLellan and the 102 rejection is improper.

Independent claim 1 defines an interrogator of a wireless communication system including:

a *communication station configured to receive a return link wireless signal from a remote communication device and to generate a return link communication signal corresponding to the return link wireless signal;*

communication circuitry coupled with the communication station and configured to communicate the return link communication signal; and

a housing remotely located with respect to the communication station and including circuitry configured to receive the return link communication signal from the communication circuitry.

The Office on page 2 of the Action identifies reference 307 of Fig. 3 of U.S. Patent No. 5,649,296 to MacLellan (hereinafter "MacLellan") as teaching the claimed communication station. At page 2 of the Action, the Office identifies mixer 308 and amplifier 309 as teaching the claimed communication circuitry. On page 3 of the Action, the Office identifies references 310, 310a, 312, 300 as allegedly teaching the claimed housing. Initially, reference 310 is disclosed as a band pass filter, reference 310a is a limiting amplifier, reference 312 is a demodulator and 300 is a processor. The circuits 310, 310a, 312, 300 are separate *circuit components* which may not be fairly interpreted to disclose a *housing* as specifically claimed. The claimed housing is not disclosed by the prior art and Appellants respectfully submit that the 102 rejection is in error for at

least this reason. Furthermore, the claim recites *the housing including circuitry*. The Office has failed to identify any prior art teachings of the claimed circuitry of the housing.

In addition, it is clear from Fig. 3 of MacLellan that circuits 307, 310, 310a, 312 and 300 *all reside within a single interrogator device 103*. Appellants respectfully submit that in no fair interpretation may circuit components 310, 310a, 312, and 300 (identified by the Examiner as teaching the claimed housing) be considered to be *remotely located* with respect to component 307 of the same interrogator device 103.

Appellants additionally refer to the specification of the originally filed application. For example, in the example of Fig. 1 (and claim 1 positively recites only a single communication station) each communication station 120 is remotely located from the interrogator housing 14 to communicate with a plurality of different communication ranges or read zones 15 as set forth at page 7, lines 5+ of the specification. At page 8, lines 8+ of the specification, the communication stations 120 radiate the forward link wireless signals 27 to different remote communication devices 12 within the different ranges 15. Referring to page 9, lines 1+, the communication ranges 15 may be spread out over a relatively large geographic range and at least one embodiment provides advantages of using only a single interrogator housing 14 and associated circuitry thereof to communicate with remote communication devices 12 located in plural communication ranges 15. In further examples at page 9, lines 8+, the specification provides that one embodiment permits the single interrogator housing 14 and circuitry to service multiple ranges 15 which may be located several hundred feet apart, or further, in harsh environments, in spaced warehouses, and the communication ranges 15 may be spaced from one another at distances which exceed the communication range of the

devices. Page 10, lines 4+ of the specification provide that a communication station 120 is remotely located with respect to interrogator housing 14.

Appellants respectfully submit the Office has misconstrued or inappropriately tortured the teachings of the prior art to reject the claims. Appellants respectfully submit that circuit components 310, 310a, 312, 300 of the same interrogator 103 of MacLellan may not be fairly interpreted to teach a housing. Furthermore, the circuit components 310, 310a, 312, 300 of the interrogator 103 of MacLellan and relied upon as teaching the housing may not be fairly considered to be remotely located from circuit component 307 *also of the same interrogator device 103* of MacLellan especially in the context of "remotely located" used in the present application.

At page 21 of the Action, the Office tortures the meaning of "housing" in support of the rejection by stating that a housing is considered as *spacing*. The Office has failed to provide any evidence in support of its interpretation that a housing may be considered to be any spacing. Appellants also submit the remaining argument of the Office on page 21 of the Action with respect to claim 1 fails to provide any reasonable explanation as to how the individual circuit components 310, 310a, 312, and 300 of the single interrogator device 103 of MacLellan teach the specifically claimed housing or that circuit components 310, 310a, 312 and 300 are remotely located from component 307 all of the same single interrogator device 103.

The claimed housing including circuitry and remotely located with respect to the communication station is not disclosed nor suggested by the prior art. Accordingly, Appellants respectfully submit that positively recited limitations of the claims are not

disclosed by the prior art and the rejection is in error for at least this reason. Appellants respectfully request reversal of the rejection for at least these reasons.

B. The Office has failed to establish a proper basis to combine the teachings of Reis with the teachings of MacLellan and the 103 rejection of claims 8, 10-22, 31-39, 46, 47, 49 and 57 is improper.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See, e.g., MPEP §2143 (8th ed., rev. 5).

MPEP 2142 (8th ed., rev. 5) states that the concept of *prima facie* obviousness allocates who has the burden of going forward with production of evidence in each step of the examination process and the examiner bears the *initial burden of factually supporting any prima facie conclusion of obviousness*. The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. MPEP §2142 (8th ed., rev. 5). Further, for a proper 103 rejection, the examiner must establish a factual basis to support the legal conclusion of obviousness. See *In re Fine*, 837 F.2d 1071, 1073, 5 USPO2d 1596, 1598 (Fed. Cir. 1988). Reasons for the decision to combine references must be articulated. *In re Lee*, 277 F.3d 1338, 1342, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002). The examiner must show that there is a rationale to combine references relied on as evidence of obviousness. *Id.* 277 F.3d at 1343, 61

USPQ2d at 1433-34. It is insufficient to rely on the examiner's own understanding or experience, or the Examiner's assessment of what would be basic knowledge or common sense but rather must point to some concrete evidence in the record in support of these findings. *In re Zurko*, 258 F.3d 1379, 1386, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001).

Appellants respectfully submit the factual basis is insufficient, and accordingly, the Office has failed to meet their burden of establishing a proper *prima facie* 103 rejection.

With respect to page 9 of the Action, it is alleged that the combination is appropriate in order to be able to broadcast commands on a one-to-many basis or even one to one basis on multiple transmitters and to receive responses from the abundant remote tags on multiple receivers in a large communication region. Applicants respectfully submit that the rationale provided by the Office is insufficient.

As disclosed in Fig. 1 of MacLellan, a *plurality of interrogator devices 103 are already provided in communication with plural remote tags 105, 106, 107*. The individual interrogator devices 103 each include a transmitter and receiver for communicating with tags. Accordingly, MacLellan already teaches communications using plural interrogators having multiple transmitters and receivers for communication with tags without any modification per Reis. Appellants respectfully submit that it is inappropriate to rely upon a teaching of another reference (Reis) when the reference being modified (MacLellan) already provides teachings for which the other reference is provided.

At page 22 of the Action, the Office alleges that the multiple tags and interrogators of Reis disclose a suggestion that there can be simultaneous and abundant communication one to many tags communication from different tags to save time and to reduce the need of having another interrogator built with a separate receiver/transmitter and that one would be able to find that the combination of multiple receivers within the interrogator from multiple tags is proper. The Office has failed to identify any objective evidence or factual basis in support of the allegations of page 22 of the Action. There is no evidence that the multiple interrogators of MacLellan suffer from any deficiencies which may be improved by Reis. Further, MacLellan at col. 3, lines 30+ discloses multiple interrogators which may already individually communicate with multiple tags. There is no teaching that the modification proposed by the Office "saves time" as baldly alleged. Furthermore, the reducing the need to have another interrogator built alleged by the Office is contrary to the explicit multiple interrogator 103 arrangement of MacLellan. MPEP 2143.01 V (8th ed., rev. 5) provides that there is insufficient factual basis to make a proposed modification for a proper 103 rejection if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

The Office has failed to identify any benefit or improvement resulting from the combination of references which is supported by objective evidence as a rationale for combining the references. Furthermore, the mere fact that references can be combined does not render the resultant combination obvious *unless the prior art also suggests the*

desirability of the combination. MPEP §2143.01III (8th ed., rev. 5) *citing In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

In consideration of the lack of any proper objective evidence to support the combination of references, Appellants respectfully submit that the Office has improperly relied upon Appellants' disclosure in formulating the 103 rejection. There is no evidence of any improvement resulting from the combination of reference teachings or other proper rationale for combining the references. Appellants respectfully submit that the Office has failed to meet their burden of establishing a proper *prima facie* 103 rejection and the rejection is improper for at least this reason.

In sum, there have been no deficiencies of the primary reference identified by the Office to compel one to look to Reis for meaningful corrective teachings. There is no evidence of record that the primary reference being modified suffers from any deficiencies or that any deficiencies would be solved by the combination proposed by the Office. There is no evidence of record that any improved operations of the primary reference would result from the combination proposed by the Office. The only rationale provided by the Office is unsupported and conclusory and/or improperly based upon Applicants' own teachings. Appellants respectfully submit the Office has failed to establish proper factual basis for at least the above-mentioned compelling reasons.

Appellants respectfully request reversal of the rejections for at least these reasons.

C. Positively-recited limitations of claims 10-17 and 46 are not disclosed by the combination of MacLellan and Reis and the Office has failed to establish a prima facie 103 rejection.

Independent claim 10 recites an interrogator comprising communication stations, communication circuits and a housing remotely located with respect to the communication stations and including circuitry configured to receive the return link communication signals from the communication circuits and to process the return link communication signals.

At pages 11-12 of the Office Action, the Office identifies amplifier 307 of interrogator 103 of MacLellan as teaching a communication station and circuit components 310, 310a, 312 and 300 of the same interrogator device 103 as teaching the claimed housing.

Appellants respectfully submit the Office has misconstrued or inappropriately tortured the teachings of the prior art to reject the claims. Appellants respectfully submit that circuit components 310, 310a, 312, 300 of MacLellan including a filter, amplifier, demodulator and processor are circuits which may not be fairly interpreted to teach a housing. The claimed housing is not disclosed by the prior art and Appellants respectfully submit the Office has failed to establish a prima facie 103 rejection for at least this reason.

Furthermore, the circuit components 310, 310a, 312, 300 of the interrogator 103 of MacLellan relied upon as teaching the housing may not be fairly considered to be *remotely located* from circuit component 307 internal of the same interrogator device 103 of MacLellan especially in the context of the present application.

Appellants respectfully submit that positively recited limitations of the claims are not disclosed by the prior art and the Office has failed to meet its burden of establishing a proper *prima facie* 103 rejection. Appellants respectfully request reversal of the rejection for at least these reasons.

D. Positively-recited limitations of claims 18-22 and 47 are not disclosed by the combination of MacLellan and Reis and the Office has failed to establish a *prima facie* 103 rejection.

Independent claim 18 recites an interrogator comprising communication stations, and a housing remotely located with respect to the communication stations and including circuitry configured to receive the return link communication signals from the communication stations and to process the return link communication signals.

At pages 14-15 of the Office Action, the Office identifies amplifier 307 of interrogator 103 of MacLellan as teaching a communication station and circuit components 310, 310a, 312 and 300 of the same interrogator device 103 as teaching the claimed housing. Appellants respectfully submit that circuit components 310, 310a, 312, 300 of MacLellan including a filter, amplifier, demodulator and processor are circuits which may not be fairly interpreted to teach a *housing*. Furthermore, the circuit components 310, 310a, 312, 300 of the interrogator 103 of MacLellan and relied upon as teaching the housing may not be fairly considered to be *remotely located* from circuit component 307 internal of the same interrogator device 103 of MacLellan especially in the context of the present application.

Appellants respectfully submit that positively recited limitations of the claims are not disclosed by the prior art and the Office has failed to meet its burden of establishing a proper *prima facie* 103 rejection. Appellants respectfully request reversal of the rejection for at least these reasons.

E. Positively-recited limitations of claims 24-30, 39, 41 and 48 are not disclosed by MacLellan and the 102 rejection is improper.

Independent claim 24 recites a method comprising *receiving a return link wireless signal within a communication station*, generating a return link communication signal, communicating the return link communication signal using the communication circuitry, and receiving the *return link communication signal from the communication circuitry within a housing remotely located from the communication station*.

Referring to page 4 of the Office Action, the Office identifies amplifier 307 as teaching the receiving limitations of claim 24 and circuit components 310, 310a, 312 and 300 of the same interrogator device 103 as teaching the claimed receiving the return link communication signal within a housing. Appellants respectfully submit that circuit components 310, 310a, 312, 300 of MacLellan may not be fairly interpreted to teach a *housing* and circuit components 310, 310a, 312, 300 may not be fairly considered to be *remotely located* from circuit component 307 internal of the same interrogator device 103 which includes circuit components 310, 310a, 312, 300.

The claimed housing is not disclosed nor suggested by the prior art. Furthermore, a housing remotely located from the communication station is not disclosed nor suggested by the prior art. Appellants respectfully submit that positively

recited limitations of the claims are not disclosed by the prior art and the 102 rejection is improper. Appellants respectfully request reversal of the rejection for at least these reasons.

F. Positively-recited limitations of claims 31-37 and 49 are not disclosed by the combination of MacLellan and Reis and the Office has failed to establish a prima facie 103 rejection.

Independent claim 31 recites a method comprising *providing an interrogator having a housing and a plurality of communication stations remotely located from the housing, receiving return link wireless signals within respective communication stations, generating return link communication signals, communicating the return link communication signals from the communication stations using communication circuits, and receiving the return link communication signals within the housing from the communication circuits.*

Referring to page 17 of the Office Action, Appellants respectfully submit the internal circuit component teachings of references 307, 310, 310a, 312 and 300 of the same interrogator device 103 fails to teach or suggest the claimed providing the interrogator having a housing and a plurality of communication stations remotely located from the housing. Appellants respectfully submit that circuit components 310, 310a, 312, 300 of MacLellan may not be fairly interpreted to teach a *housing* and circuit components 310, 310a, 312, 300 may not be fairly considered to be *remotely located* from circuit component 307 which is internal of the same interrogator device 103 which includes circuit components 310, 310a, 312, 300.

The claimed providing is not disclosed nor suggested by the prior art and Appellants respectfully submit that positively recited limitations of the claims are not disclosed by the prior art and the Office has failed to meet its burden of establishing a proper *prima facie* 103 rejection. Appellants respectfully request reversal of the rejection for at least these reasons.

G. Positively-recited limitations of claims 4 and 27 are not disclosed by MacLellan and the 102 rejection is improper.

Claim 4 recites in combination with claim 3 that the *housing includes adjustment circuitry configured to output the return link communication signal at a substantially constant level*. Claim 27 recites in combination with claim 26 *adjusting at least one characteristic of the return link communication signals after receiving the signal in the housing and providing the return link communication signal having a substantially constant level*.

Referring to pages 3 and 5 of the Action with respect to claims 4 and 27, the Office states that the BPF 310 and limiting amplifier 310a disclose the above-recited limitations without reference to any additional prior art teachings. The Office has failed to provide any explanation as to how a band pass filter configured to filter frequencies is considered to teach the claimed limitations regarding a signal having a substantially constant level. The Office has failed to identify any evidence that a limiting amplifier provides signals at a constant level.

Appellants also refer to an example embodiment of the specification. At page 32, lines 5+, it is stated that the adjustment circuitry 96 outputs signals having a constant

level and may provide signals having a power level of approximately 3 dBm in one embodiment. The Office has failed to identify any prior art teachings which may be fairly interpreted to disclose the limitations of the claims as used in the present application.

Appellants respectfully submit that positively recited limitations of the claims are not disclosed by the prior art and the 102 rejection is improper. Appellants respectfully request reversal of the rejection for at least these reasons.

H. Positively-recited limitations of claims 13 and 34 are not disclosed by the combination of MacLellan and Reis and the Office has failed to establish a *prima facie* 103 rejection.

Claim 13 recites in combination with claim 12 that *the housing includes adjustment circuitry configured to output the return link communication signal at a substantially constant level*. Claim 34 recites in combination with claim 33 adjusting at least one characteristic of the return link communication signals after receiving the signals in the housing and *providing the return link communication signals having a substantially constant level*.

Referring to pages 14 and 18 of the Action with respect to claims 13 and 34, the Office states that the BPF 310 and limiting amplifier 310a disclose the above-recited limitations without reference to any additional prior art teachings. The Office has failed to provide any explanation as to how a band pass filter configured to filter frequencies is considered to teach the claimed limitations regarding a signal having a substantially

constant level. The Office has failed to identify any evidence that a limiting amplifier provides signals at a constant level.

Appellants respectfully submit that positively recited limitations of the claims are not disclosed by the prior art and the Office has failed to meet its burden of establishing a proper *prima facie* 103 rejection. Appellants respectfully request reversal of the rejection for at least these reasons.

I. Positively-recited limitations of claim 7 are not disclosed by MacLellan and the 102 rejection is improper.

Claim 7 recites the *communication circuitry includes a coaxial RF cable*. The Office on page 3 of the Action relies upon the teachings of reference 308 "and amplifier" of MacLellan as allegedly disclosing the claimed limitations. Appellants respectfully submit that reference 308 is a quad mixer *which is void of any coaxial teachings*. Reference 308 fails to disclose the claimed coaxial RF cable.

The Office further states in support of the rejection that a cable connected from mixer to amplifier of MacLellan teaches the claim limitations. Initially, *reference 308 and the downstream amplifier are within the same device 103*. Appellants respectfully submit that it is *nonsensical to use a cable within the same device to interconnect circuits of the same device*. Furthermore, Appellants have electronically searched MacLellan and failed to uncover any teachings that the connection between the mixer and amplifier or any other connection of Fig. 3 is a cable. Further, Applicants have electronically searched MacLellan and failed to uncover any mention of a cable *let alone the specifically claimed coaxial RF cable*.

Appellants respectfully submit that positively recited limitations of the claims are not disclosed by the prior art and the 102 rejection is improper. Appellants respectfully request reversal of the rejection for at least these reasons.

J. Positively-recited limitations of claim 16 are not disclosed by the combination of MacLellan and Reis and the Office has failed to establish a prima facie 103 rejection.

Claim 16 recites the *communication circuitry includes a coaxial RF cable*. Appellants respectfully submit that reference 308 relied upon by the Office is a quad mixer *which is void of any coaxial cable teachings*. Also, *reference 308 and the downstream amplifier are within the same device 103* and there is no teaching of use of a cable within the same device to interconnect circuits of the same device. Furthermore, Appellants have electronically searched MacLellan and failed to uncover any mention of a cable *let alone the specifically claimed coaxial RF cable*.

Appellants respectfully submit that positively recited limitations of the claims are not disclosed by the prior art and the Office has failed to meet its burden of establishing a proper prima facie 103 rejection. Appellants respectfully request reversal of the rejection for at least these reasons.

K. Positively-recited limitations of claims 8 and 17 are not disclosed by the combination of MacLellan and Reis and the Office has failed to establish a *prima facie* 103 rejection.

Claims 8 and 17 individually recite that the *communication circuitry includes a plurality of wireless transceivers individually coupled with one of the housing and the communication station*. Appellants point out that the claimed wireless transceivers of claims 8 and 17 are *in addition* to the claimed communication stations configured to output and receive wireless signals. Accordingly, the interrogators of claims 8 and 17 individually recite *two different wireless communications arrangements including the communication circuitry and the communication station(s)* and each capable of wireless communications. The combined teachings of MacLellan and Reis merely teach *one wireless link between the interrogator and tags* and fail to teach wireless communications within the respective interrogators of MacLellan or Reis.

Also, the Office identifies mixer 308 and amplifier 309 of the single interrogator device 103 of MacLellan as disclosing the claimed communication circuitry. The modification proposed by the Office would result in the single interrogator device 103 having plural wireless transceivers to communicate between circuit components 307 and 310 of *the same device 103*. Appellants respectfully submit it is non-sensical to modify the interrogator 103 of MacLellan to have wireless communications between internal components of the interrogator 103 itself.

Appellants respectfully submit that positively recited limitations of the claims are not disclosed by the prior art and the Office has failed to meet its burden of establishing

a proper *prima facie* 103 rejection. Appellants respectfully request reversal of the rejection for at least these reasons.

L. Positively-recited limitations of claim 51 are not disclosed by MacLellan and the 102 rejection is improper.

Claim 51 recites that the *housing is configured to house the circuitry configured to receive and process the return link communication signal*. The Office recites references 310, 310a, 312 and 300 as allegedly disclosing the claimed housing but fails to provide any explanation as to how the circuit references 310, 310a, 312 and 300 are configured to teach a housing which is configured to house circuitry as positively claimed. Further, the Office has failed to identify prior art teachings which allegedly disclose the claimed circuitry which is housed in claim 51.

Appellants respectfully submit that positively recited limitations of the claim are not disclosed by the prior art and the 102 rejection is improper. Appellants respectfully request reversal of the rejection for at least these reasons.

M. Positively-recited limitations of claim 53 are not disclosed by MacLellan and the 102 rejection is improper.

Claim 53 recites that the *communication station and housing comprise respective different circuit devices*. The teachings of references 307, 310, 310a, 312 and 300 of the *single interrogator device 103* of MacLellan relied upon by the Office in support of the rejection fail to teach or suggest the claimed different circuit devices.

Appellants respectfully submit that positively recited limitations of the claim are not disclosed by the prior art and the 102 rejection is improper. Appellants respectfully request reversal of the rejection for at least these reasons.

N. Positively-recited limitations of claims 54-55 are not disclosed by MacLellan and the 102 rejection is improper.

Claims 54-55 recite that the *communication circuitry is configured to communicate the return link communication signal comprising a wireless signal*. The Office has failed to identify any teachings that mixer 308 or amplifier 309 (relied upon by the Office as allegedly teaching the communication circuitry) internal of the single interrogator device 103 communicate wireless signals. Appellants respectfully submit that the electrical circuit components of the mixer 308 and amplifier 309 communicate electrical signals provided by amplifier 307 of MacLellan and there is no evidence of record to support the interpretation that references 308 and 309 communicate signals having a wireless form especially in consideration of the electrical connections between the components 307, 308, 309 and 310. There is no evidence of record that the IF signal relied upon by the Office is a wireless signal.

Appellants respectfully submit that positively recited limitations of the claim are not disclosed by the prior art and the 102 rejection is improper. Appellants respectfully request reversal of the rejection for at least these reasons.

O. Positively-recited limitations of claim 55 are not disclosed by MacLellan and the 102 rejection is improper.

Claim 55 recites that the communication circuitry is configured to communicate the return link communication signal comprising a wireless signal having a *frequency outside of the frequency band of the wireless communications of the forward and return link wireless signals*. Wireless signals received by antenna 306 are not communicated by references 308 and 309 of MacLellan but rather the components communicate electrical signals as shown by the electrical connections. The Office has failed to identify any teachings that references 308 and 309 *communicate wireless signals having a frequency outside of the frequency band of the wireless communications of the forward and return link wireless signals*.

Appellants respectfully submit that positively recited limitations of the claim are not disclosed by the prior art and the 102 rejection is improper. Appellants respectfully request reversal of the rejection for at least these reasons.

P. Positively-recited limitations of claim 56 are not disclosed by MacLellan and the 102 rejection is improper.

Claim 56 recites that the communication station and housing are located in different geographical locations. The circuit component 307 (relied upon by the Office as teaching the communication station) and components 310, 310a, 312 and 300 (relied upon by the office as teaching the housing) are of the same single interrogator device 103 of MacLellan. In no fair interpretation may the internal components of the single interrogator device of MacLellan be fairly considered to be in different geographical

locations. The Office has failed to point to objective evidence in support of the rejection.

Appellants respectfully submit the claimed limitations are not disclosed nor suggested by the prior art and the rejection is in error for at least this reason. Appellants respectfully request reversal of the rejection for at least these reasons.

Q. Conclusion

In view of the foregoing, reversal of the rejections of the claims is respectfully requested. For any one of the above-stated reasons, the rejections of the respective claims should be reversed. In combination, the above-stated reasons overwhelmingly support such reversal. Accordingly, Appellants respectfully request that the Board reverse the rejections of the claims.

Respectfully submitted,

Date: 7/9/07

Attorney:



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VIII. APPENDIX A – THE CLAIMS INVOLVED IN THIS APPEAL

1. [Previously Presented] A wireless communication system comprising:
 - at least one remote communication device configured to communicate a return link wireless signal responsive to a forward link wireless signal; and
 - an interrogator including:
 - a communication station configured to output the forward link wireless signal, to receive the return link wireless signal outputted from the remote communication device and to generate a return link communication signal corresponding to the return link wireless signal;
 - communication circuitry coupled with the communication station and configured to communicate the return link communication signal; and
 - a housing remotely located with respect to the communication station and including circuitry configured to receive the return link communication signal from the communication circuitry and to process the return link communication signal.
2. [Original] The wireless communication system according to claim 1 wherein the communication station includes a low noise amplifier configured to increase the power of the return link communication signal.
3. [Original] The wireless communication system according to claim 1 wherein the housing includes adjustment circuitry configured to receive the return link communication signal from the communication circuitry and to adjust an electrical characteristic of the return link communication signal.

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4. [Original] The wireless communication system according to claim 3 wherein the adjustment circuitry is configured to output the return link communication signal at a substantially constant level.

5. [Original] The wireless communication system according to claim 1 wherein the adjustment circuitry includes automatic gain control circuitry.

6. [Original] The wireless communication system according to claim 5 wherein the automatic gain control circuitry is configured to monitor the power of the return link communication signal and to adjust the power of the return link communication signal responsive to the monitoring.

7. [Original] The wireless communication system according to claim 1 wherein the communication circuitry includes a coaxial RF cable.

8. [Original] The wireless communication system according to claim 1 wherein the communication circuitry includes a plurality of wireless transceivers individually coupled with one of the housing and the communication station.

9. [Original] The wireless communication system according to claim 1 wherein the remote communication device comprises a radio frequency identification device.

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10. [Previously Presented] An interrogator of a wireless communication system comprising:

a plurality of communication stations positioned in different locations and individually configured to output a forward link wireless signal, to receive a return link wireless signal responsive to the outputting, and to generate a return link communication signal corresponding to the return link wireless signal;

communication circuits individually coupled with the communication stations and configured to communicate respective ones of the return link communication signals; and

a housing remotely located with respect to the communication stations and including circuitry configured to receive the return link communication signals from the communication circuits and to process the return link communication signals.

11. [Previously Presented] The interrogator according to claim 10 wherein the communication stations individually include a low noise amplifier configured to increase the power of the return link communication signals.

12. [Previously Presented] The interrogator according to claim 10 wherein the housing includes adjustment circuitry configured to receive the return link communication signals from the communication circuits and to adjust an electrical characteristic of the return link communication signals.

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13. [Previously Presented] The interrogator according to claim 12 wherein the adjustment circuitry is configured to output the return link communication signals at a substantially constant level.

14. [Original] The interrogator according to claim 12 wherein the adjustment circuitry includes automatic gain control circuitry.

15. [Previously Presented] The interrogator according to claim 14 wherein the automatic gain control circuitry is configured to monitor the power of the return link communication signals and to adjust the power of the return link communication signals responsive to the monitoring.

16. [Original] The interrogator according to claim 10 wherein the communication circuitry includes a coaxial RF cable.

17. [Original] The interrogator according to claim 10 wherein the communication circuitry includes a plurality of wireless transceivers individually coupled with one of the housing and the communication station.

18. [Previously Presented] An interrogator of a wireless communication system comprising:

a plurality of communication stations individually configured to output forward link wireless signals, to receive return link wireless signals responsive to the outputting and

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to generate return link communication signals corresponding to the return link wireless signals; and

a housing remotely located with respect to at least one of the communication stations and including circuitry configured to receive the return link communication signals from the communication stations and to process the return link communication signals.

19. [Original] The interrogator according to claim 18 wherein the housing includes adjustment circuitry configured to adjust at least one electrical characteristic of the return link communication signals.

20. [Original] The interrogator according to claim 19 wherein the adjustment circuitry includes automatic gain control circuitry.

21. [Original] The interrogator according to claim 18 further comprising a plurality of communication circuits configured to communicate the return link communication signals intermediate respective communication stations and the housing.

22. [Original] The interrogator according to claim 18 wherein the communication stations are individually positioned to receive return link wireless signals within one of a plurality of communication ranges.

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24. [Previously Presented] A method of communicating within a wireless communication system comprising:

providing an interrogator and at least one remote communication device;

communicating a forward link wireless signal using a communication station of the interrogator;

communicating a return link wireless signal using the remote communication device responsive to the communicating of the forward link wireless signal;

receiving the return link wireless signal within the communication station;

generating a return link communication signal within the communication station corresponding to the return link wireless signal;

communicating the return link communication signal from the communication station using communication circuitry; and

receiving the return link communication signal from the communication circuitry within a housing of the interrogator remotely located from the communication station.

25. [Original] The method according to claim 24 further comprising amplifying the return link communication signal before the communicating the return link communication signal.

26. [Original] The method according to claim 24 further comprising adjusting at least one characteristic of the return link communication signal after the receiving the return link communication signal.

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27. [Original] The method according to claim 26 wherein the adjusting provides a return link communication signal having a substantially constant level.

28. [Original] The method according to claim 26 wherein the adjusting comprises adjusting using automatic gain control circuitry.

29. [Original] The method according to claim 24 wherein the providing at least one remote communication device comprises providing a radio frequency identification device.

30. [Original] The method according to claim 24 further comprising processing the return link communication signal after the receiving the return link communication signal.

31. [Previously Presented] A method of communicating within a wireless communication system comprising:

providing an interrogator having a housing and a plurality of communication stations remotely located from the housing;

communicating forward link wireless signals using the communication stations of the interrogator;

receiving return link wireless signals within the respective communication stations of the interrogator responsive to the communicating the respective forward link wireless signals;

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generating return link communication signals within the communication stations corresponding to the return link wireless signals;
communicating the return link communication signals from the communication stations using respective communication circuits; and
receiving the return link communication signals within the housing from the communication circuits.

32. [Previously Presented] The method according to claim 31 further comprising amplifying the return link communication signals before the communicating the return link communication signals.

33. [Previously Presented] The method according to claim 31 further comprising adjusting at least one characteristic of the return link communication signals after the receiving the return link communication signals.

34. [Previously Presented] The method according to claim 33 wherein the adjusting provides return link communication signals having a substantially constant level.

35. [Original] The method according to claim 33 wherein the adjusting comprises adjusting using automatic gain control circuitry.

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36. [Previously Presented] The method according to claim 31 wherein the communication stations individually receive return link wireless signals within one of a plurality of communication ranges.

37. [Previously Presented] The method according to claim 31 further comprising processing the return link communication signals after the receiving the return link communication signals.

38. [Previously Presented] The wireless communication system according to claim 1 wherein the interrogator comprises a plurality of the communication stations.

39. [Previously Presented] The method according to claim 24 wherein the providing comprises providing the interrogator comprising a plurality of the communication stations.

40. [Previously Presented] The wireless communication system according to claim 1 wherein the at least one remote communication device is configured to receive the forward link wireless signal and to communicate the return link wireless signal responsive to receiving the forward link wireless signal.

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41. [Previously Presented] The method according to claim 24 further comprising receiving the forward link wireless signal within the at least one remote communication device, and wherein the communicating the return link wireless signal is responsive to the receiving.

44. [Previously Presented] The wireless communication system according to claim 1 wherein the at least one remote communication device and the interrogator are configured to implement radio frequency identification device (RFID) communications.

45. [Previously Presented] The wireless communication system according to claim 1 wherein the communication station is configured to generate the return link communication signal comprising data received within the return link wireless signal.

46. [Previously Presented] The interrogator according to claim 10 wherein the communication stations are individually configured to generate the return link communication signal comprising data received within the return link wireless signal.

47. [Previously Presented] The interrogator according to claim 18 wherein the communication stations are configured to generate the return link communication signals comprising data received within respective ones of the return link wireless signals.

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48. [Previously Presented] The method according to claim 24 wherein the generating comprises generating the return link communication signal to comprise data received within the return link wireless signal.

49. [Previously Presented] The method according to claim 31 wherein the generating comprises generating the return link communication signals to comprise data received within respective ones of the return link wireless signals.

50. [Previously Presented] The wireless communication system according to claim 1 wherein the housing is configured to house the circuitry configured to receive the return link communication signal and to process the return link communication signal.

51. [Previously Presented] The wireless communication system according to claim 1 wherein the housing is configured to house the circuitry configured to receive the return link communication signal and to process the return link communication signal separately from circuitry of the communication station.

52. [Previously Presented] The wireless communication system according to claim 1 wherein the communication station comprises a circuit device remotely located from the housing.

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53. [Previously Presented] The wireless communication system according to claim 1 wherein the communication station and housing comprise respective different circuit devices.

54. [Previously Presented] The wireless communication system according to claim 1 wherein the communication circuitry is configured to communicate the return link communication signal comprising a wireless signal.

55. [Previously Presented] The wireless communication system according to claim 1 wherein the communication circuitry is configured to communicate the return link communication signal comprising a wireless signal having a frequency outside of a frequency band of the wireless communications of the forward link wireless signal and the return link wireless signal.

56. [Previously Presented] The wireless communication system according to claim 1 wherein the communication station and housing are located in different geographical locations.

57. [Previously Presented] The wireless communication system according to claim 1 wherein the interrogator comprises a plurality of the communication stations configured to communicate with respective remote communication devices located in different geographical locations.

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IX. APPENDIX B – EVIDENCE APPENDIX

Appellants submit no evidence with the appellate brief.

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X. **APPENDIX C - RELATED PROCEEDINGS**

Appellants are not aware of any related proceedings.